

Claims

1. A computer implemented complexity indicator (121) having instructions for evaluating the complexity of a user interface that has device class specific representations (301, 302), each device class specific representation (301, 302) referring to a respective device class (DC1, DC2) and having a respective layout component hierarchy (321, 322);  
5 the complexity indicator (121) comprising:  
10 a library (121-1) having complexity evaluation functions (EF5-DC1, EF5-DC2, EF6-DC1, EF6-DC2) for determining complexity values of layout components (1 to 9) of the respective layout component hierarchies (321, 322), where each complexity evaluation function (EF5-DC1, EF5-  
15 DC2, EF6-DC1, EF6-DC2) is associated with the layout component (5, 6) to which it is applied; and  
means for aggregating the complexity values by  
20 device class according to the corresponding layout component hierarchy (321, 322) of the respective device class specific representation (301, 302).

2. The complexity indicator of claim 1, further comprising:
  - a transformer (121-3) for transforming the layout component hierarchy (321, 322) of each representation (301, 302) into a corresponding complexity evaluation hierarchy (521, 522) so that the association of each evaluation function (EF5-DC1, EF5-DC2, EF6-DC1, EF6-DC2) with its respective layout component (5, 6) is redirected through the corresponding component (c5, c6) of the respective complexity evaluation hierarchy (521, 522) and the evaluation function is applied to the corresponding component (c5, c6) of the respective complexity evaluation hierarchy (521, 522).  
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3. The complexity indicator of claim 1 or 2, further comprising:
  - a complexity display (121-2) for visualizing the aggregate complexity values by device class.  
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  4. The complexity indicator of claim 3, wherein the complexity display (121-2) has a drill down portion (121-2') for visualizing complexity values of layout components (2, 4, 7) related to a selected device class (DC2).  
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  5. The complexity indicator of claim 4 in combination with:
    - a tree-based outline editor (109) for generating an outline view (322) of the representation (302) that corresponds to the selected device class (DC2) configured to highlight a layout component that is selected in the complexity display (121-2) for drill down purposes.  
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6. A computer implemented method for complexity evaluation of a user interface, comprising the steps of:

receiving (430) device class specific representations (301, 302) of the user interface, wherein each device class specific representation (301, 302) refers to a respective device class (DC1, DC2);  
determining complexity values of layout components (1 to 9) of the device class specific representations (301, 302) by applying complexity evaluation functions (EF5-DC1, EF5-DC2, EF6-DC1, EF6-DC2) that are associated with respective layout components (5, 6); and  
aggregating the complexity values by device class according to a corresponding layout component hierarchy (321, 322) of the respective device class specific representation (301, 302).

20 7. The method of claim 6, further comprising the step of:

transforming the layout component hierarchy (321, 322) of each representation (301, 302) into a corresponding complexity evaluation hierarchy (521, 522) so that the association of each evaluation function (EF5-DC1, EF5-DC2, EF6-DC1, EF6-DC2) with its respective layout component (5, 6) is redirected through the corresponding component (c5, c6) of the respective complexity evaluation hierarchy (521, 522) and the evaluation function is applied to the corresponding component (c5, c6) of the respective complexity evaluation hierarchy (521, 522).

8. The method of claim 6 or 7, further comprising the step of:  
visualizing the aggregate complexity values by device class.

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9. The method of claim 8, wherein the visualizing step comprises:  
visualizing complexity values of layout components (2, 4, 7) related to a selected device class  
10 (DC2) in a drill down portion (121-2').

10. A computer system having at least one computing device configured to run an integrated development environment (999) that comprises a complexity indicator (121) according to any one of the claims  
15 1 to 4.

11. The computer system of claim 10 when dependent on claim 4, wherein the integrated development  
20 environment (999) further comprises:  
a tree-based outline editor (109) for generating an outline view (322) of the representation (302) that corresponds to the selected device class (DC2) configured to highlight a layout component that is selected in the complexity display (121-2) for drill down purposes.  
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